UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte ROSS HEITKAMP, MICHAEL ARMSTRONG, MICHAEL BEESLEY, ASHOK KRISHNAMURTHI, KENNETH RICHARD POWELL and MIKE M. WU

Appeal No. 2005-1585
Application No. 09/751,449

ON BRIEF

Before RUGGIERO, LEVY, and MACDONALD, ***Administrative Patent Judges***.

MACDONALD, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-6 and 9-17.

Claims 1-22 and 24-25 are pending in the application. Claims 7-8 are indicated as allowable if rewritten in independent form (Examiner's answer at page 3). Claims 18-22 and 24-25 are indicated as allowable (answer at page 3). Claim 23 has been cancelled.

Invention

Appellants' invention relates to a system comprising a master control processor, a bus controller, and a midplane. The bus controller is connected to the master control processor and implements a serial bus interface between the master control processor and a plurality of serial bus devices. The master control processor and the bus controller are located on a first circuit board. Moreover, additional circuit boards are connected to the serial bus interface through the midplane. Each of the additional circuit boards includes a switch that electrically connects or isolates the circuit board from the master processor and bus controller. Local control logic outputs a signal that controls the state of the switch. A second aspect of the present invention is directed to a network device in a computer network that includes a routing engine and a packet forwarding engine. The packet forwarding engine additionally includes a midplane, a first circuit board having a master control processor, and second circuit boards each having a control processor. The first and second circuit boards are electrically coupled through the midplane and the second circuit boards each additionally include a switch configured to electrically connect, when in a first state, or disconnect, when in a second state, the second circuit board from the first circuit board via a serial control bus. The switch of a particular one of the second circuit boards is in the first state only when the switches on each of the other of the second circuit boards are in the second state. Appellants' specification at page 3, line 22, through page 4, line 19.

Claim 1 is representative of the claimed invention and is reproduced as follows:

1. A system comprising:

a master control processor;

a bus controller connected to the master control processor and implementing a serial bus interface between the master control processor and a plurality of serial bus devices, the master control processor and the bus controller being on a first circuit board;

a midplane connected to the bus controller on the first circuit board; and

a plurality of additional circuit boards connected to the serial bus interface through the midplane, each of the plurality of additional circuit boards including

one or more of the serial bus devices,

a switch configured to electrically connect the circuit board corresponding to the switch to the first circuit board through the serial bus interface when the switch is controlled to be in a first state and to electrically isolate the circuit board corresponding to the switch from the serial bus interface on the first circuit board when the switch is controlled to be in a second state, and

local control logic for outputting a signal for controlling the state of the switch, the local control logic controlling the switch to be in the first state when the switches on each of the other of the plurality of additional circuit boards are in the second state.

References

The references relied on by the Examiner are as follows:

Wong et al. (Wong)	5,957,985	Sep. 28, 1999
Baxter et al. (Baxter)	6,122,756	Sep. 19, 2000
Simpson et al. (Simpson)	6,301,623	Oct. 9, 2001
Aggarwal et al. (Aggarwal)	6,330,614	Dec. 11, 2001
Atkinson et al. (Atkinson)	6,381,239	Apr. 30, 2002
Jobs et al. (Jobs)	6,526,464	Feb. 25, 2003
Li et al. (Li)	6,532,500	Mar. 11, 2003

Rejections At Issue

Claims 1-2 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs et al. (Jobs), Atkinson et al. (Atkinson), and Wong et al. (Wong).

Claims 3 and 6 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs, Atkinson, Wong, and Simpson et al. (Simpson).

Claims 4-5 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs, Atkinson, Wong, Simpson, Li et al. (Li) and Baxter et al. (Baxter).

Claims 9-10 and 13 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs, Atkinson, and Aggarwal et al. (Aggarwal).

Claims 11-12 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs, Atkinson, Aggarwal, and Wong.

Claims 14 and 17 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs, Atkinson, Aggarwal, and Simpson.

Claims 15-16 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Jobs, Atkinson, Aggarwal, Simpson, Li, and Baxter.

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.[1]

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[1] Appellants filed an appeal brief on August 3, 2004. The Examiner mailed an Examiner's Answer on November 24, 2004.

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellants and the Examiner, for the reasons stated ***infra***, we reverse the Examiner's rejection of claims 1-6 and 9-17 under 35 U.S.C. § 103.

Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but chose not to make in the brief have not been considered. We deem such arguments to be waived by Appellants [see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

I. Whether the Rejection of Claims 1-2 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 1-2. Accordingly, we reverse. In our discussion below, we treat claim 1 as a representative claim of claims 1-2.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a ***prima facie*** case of obviousness. ***In re Oetiker***, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). ***See also In re Piasecki***, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the

prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. ***In re Fine***, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. ***Oetiker***, 977 F.2d at 1445, 24 USPQ2d at 1444. ***See also Piasecki***, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." ***Oetiker***, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." ***In re Lee***, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claim 1, at pages 8-11 of the brief, Appellants argue that various features are not taught within certain ones of the applied references. We find these arguments wholly unpersuasive as the features are clearly taught within other applied references as specified in the Examiner's rejection. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. ***See In re Keller***, 642 F.2d 413, 426, 208 USPQ 871, 882 (CCPA 1981); ***In re Merck & Co.***, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986).

Appellants further argue at pages 11-13 that there is no motivation to combine the references as the Examiner has suggested. Notwithstanding our findings above as to the teachings of the references, we agree with Appellants that there is no motivation to combine these references as suggested. We agree with the Examiner that Wong teaches switches for controlling access to the bus. However, without a further teaching, we do not agree with the Examiner's statement at page 7 of the brief that Wong's switches "are equivalent to the switches [206 and 208 in Jobs]." We find that there is no teaching in the references nor any proper motivation stated for moving Jobs' switches 206 and 208 into the individual devices. Switches 206 and 208 control buses 214 and 216. Moving these switches into the individual devices would leave the buses without a switching mechanism.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

II. Whether the Rejection of Claims 3-6 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 3-6. Accordingly, we reverse.

With respect to dependent claims 3-6, we note that the Examiner has relied on the Simpson, Li, and Baxter references to teach the features of claims

3-6. The Simpson, Li, and Baxter references in combination with the Jobs, Atkinson, and Wong references fail to cure the deficiencies of Jobs, Atkinson, and Wong noted above with respect to claim 1. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the same reasons as set forth above.

III. Whether the Rejection of Claims 9-10 and 13 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 9-10 and 13. Accordingly, we reverse. In our discussion below, we treat claim 9 as a representative claim of claims 9-10 and 13.

With respect to dependent claim 9, Appellants argue at pages 20-21 of the brief, that there is no proper motivation given for combining the references. For the same reasons as discussed above with respect to the switches in the Jobs and Wong references, we do not find a proper motivation in the rejection before us for combining the circuit board level switch teaching of Atkinson with the system taught by Jobs.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

IV. Whether the Rejection of Claims 11-12 and 14-17 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 11-12 and 14-17. Accordingly, we reverse.

With respect to dependent claims 11-12 and 14-17, we note that the Examiner has relied on the Simpson, Li, and Baxter references to teach the features of claims 11-12 and 14-17. The Simpson, Li, and Baxter references in combination with the Jobs, Atkinson, and Aggarwal references fail to cure the deficiencies of Jobs, Atkinson, and Aggarwal noted above with respect to claim 9. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the same reasons as set forth above.

Conclusion

In view of the foregoing discussion, we have not sustained the rejection under 35 U.S.C. § 103 of claims 1-6 and 9-17.

REVERSED

JOSEPH F. RUGGIERO)
Administrative Patent Judge)
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STUART S. LEVY) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
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